



KARO ECHO Newsletter

KARO ECHO

Serving the communities
of El Cerrito and
Kensington, California

Web: www.karoecho.net

Facebook:
[KARO ECHO facebook](#)

Email: info@karoecho.net

Important Frequencies

KE Primary: 146.415 MHz
Weekly Net, Thurs. 1900

KE Secondary: 146.475 MHz

4Cs Repeater: 145.110 MHz
(TX down 600 with PL 82.5)

Monthly Meetings

In-person meetings

2nd Monday of each month
7:00 pm

(online via Zoom for now)

Arlington Park Clubhouse,
1120 Arlington Blvd,
El Cerrito, CA

The next meetings are:

Dec 11th, 2020

Feb 8th, 2020

Meeting minutes are on
the website in the past
events page.

What's New

KARO ECHO Monthly Meeting, January 11th, 1900 — ONLINE VIA ZOOM

The monthly KARO ECHO meeting will once again be held using the Zoom online meeting app, at the usual time, 1900, Monday January 11th. Look for the link to join in a KARO ECHO email from Howdy KE6BEE. Topics will include: Radio Infrastructure, Training and Operations, Outreach and Recruiting, Funding and Neighborhood nets. The training session will continue the December meeting discussion of use of digital modes in emergency communication.

Elections for KARO ECHO officers

Elections for KARO ECHO officers were held during the [December 14th meeting](#). Thank you to the Nomination Committee (Marian KC6OBK, Natalie KM6UCF, Tom KN6UBY, Annette KK6SWK, Jamuel KM6HBO, and Don NI6A). The following officers were nominated and elected:

President: Hal KK6NDF

Vice President: Howdy KE6BEE

Secretary: Tom KN6BUY

Treasurer: Larry KK6GIO

Important! - Membership Renewals are due at the beginning of the year

Please renew your KARO ECHO membership dues for the coming year. You can pay Treasurer Larry KK6GIO (check made out to KARO ECHO). Mail to P.O. Box 2025, El Cerrito, CA, 94530-3651. \$30 for individual membership, or \$40 for family membership.

Digital Modes for Emergency Communications (cont.)

While analog voice will likely remain the main mode for emergency communications operations, there is value to exploring the ways that digital communications can also support emergency response and how KARO ECHO might want to implement this. The last page of this newsletter provides some additional background and links as a continuation of the topics introduced in the [December newsletter](#) and [membership meeting presentation regarding digital modes](#).

LOCAL NETS**KARO ECHO NET**

146.415 MHz Simplex

Thursday eve, immediately after the West Contra Costa RACES Net, but never before 1900 hours local time.

West Contra County ACS/RACES Net

145.110 MHz repeater

(TX down 600 with PL 82.5)

Thursday: 1845 local time

Contra Costa County HF EmComm/RACES Net

3893 KHz

Thursday: 1835 local time

American Red Cross of the Bay Area (ARCBA)

WW6BAY Repeater

443.975 MHz

TX +5 MHz, PL 100 Hz

Wednesday: 2000 local time

BOARD OFFICERS

President: Hal KK6NDF

Treasurer: Larry KK6GIO

Secretary: Natalie KM6UCF

Outreach Manager:

Annette, KJ6SWK

Emergency Coordinator:

(also newsletter and net coordinator)

Howdy KE6BEE

Webmaestro: Rob K6RJM

What's New *(continued)***Neighborhood nets and Communication Hub Activities**

The first Wednesday of the month has a lot of radio activity in the area.

West county EmComm net out of Richmond at 11 am (starts after the Richmond siren test) FRS/GRMS simplex (on Ch.19, secondary Ch. 17) immediately followed by a ham net on the [WA6KQB 440 repeater](#) with WA6DUR repeater as secondary (see freq. information below)

East Richmond Heights, ham operators check-in at 1845 on Walt's WA6DUR repeater 442.150 +5 offset and PL tone 107.2Hz.

EC4 (central El Cerrito Hills) CERT Net, Ch. 2 simplex (462.5875), at 1845

EC9 (north El Cerrito Hills) CERT Net, Ch. 15 simplex (462.550), at 1900

East Richmond Heights, Ready-2-React Net, Ch. 7 simplex (462.7125), at 1930

Richmond simulated EOC net, first Thursdays at 1030, on three simplex frequencies in this order: 147.450, 441.000, 223.400

New - Albany Radio Net, Wed. (weekly) 1900 on Ch.19 [Albany Radio groups.io](#)
[Coordination of neighborhood FRS/GMRS frequencies can be found here.](#)

New Elmering Online Resource

A new online elmering resource has been established, the elmer@karoecho.net email and google group. Anyone can email this address with a technical question about ham radio or emergency communications procedure. Or, just ask how to get started. Knowledgeable KARO ECHO members will provide answers and discussion. The emails can be browsed as a later resource by using the google group web interface.

Welcome New Hams

New El Cerrito licenses issued: none in past month

New Kensington licenses issued: none in past month

Action - Contribute to this Newsletter

Content for this newsletter is always welcome. Anyone with events or other content suggestions please send them to the newsletter editor Howdy KE6BEE ke6bee@arrl.net

Activities

Weekly Net Control Rotation

Thanks go out to the volunteer stations who have been taking turns as Net Control Stations (NCS) each Thursday. This rotation has been working very well and everyone has been doing a great job. The regular NCS roster has 9 operators. We have one opening as an opportunity for others to fill in. Please volunteer to give it a try. [Download the new Net Script for NCS operators.](#)

Below are the current scheduled dates for each operator. The [KARO ECHO google calendar](#) also has these assignments and can be found at the bottom of the events page. Add to your electronic calendar By pressing the "+GoogleCalendar" button in the lower right.

Net control is a skill that many operators should have and regularly practice. Please contact Howdy ke6bee@arrl.net if you are interested in taking a net control assignment.

Callsign	Name	Assigned Dates (skipped: 11/26/2020, 11/25/2021, 12/24/2020, 12/31/2020)						
KE6BEE	Howdy Goudey	9/17/2020	11/19/2020	2/11/2021	4/15/2021	6/17/2021	8/19/2021	10/21/2021
KK6NDF	Hal Graboske	9/24/2020	12/3/2020	2/18/2021	4/22/2021	6/24/2021	8/26/2021	10/28/2021
KM6HBO	Jamuel Starkey	10/1/2020	12/10/2020	2/25/2021	4/29/2021	7/1/2021	9/2/2021	11/4/2021
	Open	10/8/2020	12/17/2020	3/4/2021	5/6/2021	7/8/2021	9/9/2021	11/11/2021
K6RJM	Rob McNicholas	10/15/202	1/7/2021	3/11/2021	5/13/2021	7/15/2021	9/16/2021	11/18/2021
KE6HCE	Armando Picciotto	10/22/202	1/14/2021	3/18/2021	5/20/2021	7/22/2021	9/23/2021	12/2/2021
NI6A	Don Simon	10/29/202	1/21/2021	3/25/2021	5/27/2021	7/29/2021	9/30/2021	12/9/2021
KM6TCB	Dave Roth	11/5/2020	1/28/2021	4/1/2021	6/3/2021	8/5/2021	10/7/2021	12/16/2021
KK6ZPM	Karen Fenton-Leong	11/12/202	2/4/2021	4/8/2021	6/10/2021	8/12/2021	10/14/2021	12/23/2021

Thursday Net Training Exercises

Following the net check-ins every Thursday at 1900 on 146.415, KARO ECHO usually runs a training exercise to learn and practice skills that are important for successful disaster communications.

[A list of potential training exercises](#) is posted and maintained on the training page of the website.

[Our check-in counts for 2020](#) are up strongly (+35-40%). We logged 1008 total check-ins for 2020 compared to 743 in 2019 and 609 in 2018. We averaged 21 check-ins per week, compared to 15/week in 2019 and 14/week in 2018. A total of 72 unique callsigns have checked in to the net this year. Our max weekly count was 28.

Overall, it is great to see that more operators are regularly active. Thanks for your participation. Keep it up!

About KARO ECHO

KARO ECHO is the name of the Kensington Amateur Radio Operators and the El Cerrito Ham Operators mutual benefit association, an all-volunteer non-profit group of amateur radio operators providing auxiliary communications for the cities of Kensington and El Cerrito in the event of a disaster. KARO ECHO works with CERT (Community Emergency Response Teams) in Kensington and El Cerrito, but is not an official part of the CERT program.

Monthly in-person meetings of KARO ECHO are on the 2nd Monday of each month at 7:00 pm at the Arlington Park Clubhouse, 1120 Arlington Blvd, El Cerrito, CA. The next meetings are:

- ♦ Jan 11th, 2020
- ♦ Feb 8th, 2020

Yearly membership dues are \$30/year for individuals, \$40/year for a family membership. Payments can be given to the Treasurer at monthly meetings or mailed to the address below. Participation is welcome independent of paid membership, but only licensed amateur radio operators who are dues paying KARO ECHO members will be allowed to vote on KARO ECHO business. Dues cover our 510c3 registration, post office box, web page, station operating manuals and more. Your input on useful expenditures to aid emergency communications is welcome.

Mail to: KARO ECHO, PO Box 2025, 6324 Fairmont Ave, El Cerrito, CA 94530-3651

Please see our website for more information: www.karoecho.net

You can contact the KARO ECHO board by email: info@karoecho.net

KARO ECHO Facebook

The [KARO ECHO Group on Facebook](#) has a lot of good information, more than is contained on our website. There is a whole wide world of emergency communications information at <https://www.facebook.com/groups/1451216838315743/> Check it out and be inspired of what we can do to help disaster victims in our community.

Weekly Training Net

The Karo-Echo Weekly Training Net meets every Thursday evening immediately after the West Co Co County RACES/ACS Net; but not before 1900 on 146.415 MHz Simplex. Details at <https://www.karoecho.net/events>

KARO-ECHO Frequencies

The KARO ECHO primary frequency is 146.415 MHz simplex. Our secondary frequency is 146.475 MHz simplex, a 60 KHz spread between operating frequencies reduces adjacent frequency interference.

Newsletter Content Wanted

Any input on content you'd like to propose for inclusion in the KARO ECHO newsletter can be sent to Howdy ke6bee@arrl.net We welcome all ideas for content including announcements, events, etc.

Outreach, Education and Licensing

Local and Online Ham License Classes and Exams

COVID restrictions have changed ham license classes and exams. Many are now offered in distanced/outdoor venues or entirely online. See a [list of opportunities on the KARO ECHO website](#)

Training for Beginning Operators

Thanks to Jay KJ6WSS, Edward KM6UBY and Karen KK6ZPM for their May 23rd introductory radio class, with emphasis on the GMRS radio BTECH-V1. [A recording of the class and other resources are available here.](#)

Net Control Operator Training

Diane KK6RED, David KJ6AAT and Howdy KE6BEE taught an Apr 4th net control class for C8 the county wide CERT organization. There was a great reception to this class across the county and we inspired many groups to expand the scope of their net trainings. [The class recording is available here.](#)

EMCOMM related videos

See the CERT SET Youtube video link

<https://www.youtube.com/watch?v=66DdgGLn4c&list=PLROOaUIKdrEgSID1bQJZojW3PzfURoEY-&index=144&t=0s>

Post Camp Fire GMRS organization

https://www.youtube.com/watch?time_continue=220&v=aZiSC4sgKYw&feature=emb_logo

ELMERING

An online elmering forum can be accessed by emailing elmer@karoecho.net or browsing the associated google group. More in-depth elmering/mentoring is available by request.

In the meanwhile, please check out the plethora of useful information at <https://www.karoecho.net> website.

Encouragement to Monitor 146.415 and Explore Other Nets

During the current shelter in place, with time spent at home, it is a good opportunity to use your radio and monitor 146.415 (call out for others occasionally and make some casual contacts). There are a lot of other nets around the bay area that you can reach. Expand your radio horizons. See the [KARO ECHO Coordination page](#) for a listing of some other nets to explore. You can just listen at first, or program your radio (if a repeater is used) and try transmitting as a guest check-in to see if you can make contact.

KAROECHO.Net Website

Especially, check out the EVENTS Page (<https://www.karoecho.net/events>) and the WORKSTREAMS drop-down menu which will lead one to an extensive training page that provides online learning at your own pace. Everything from the very beginning to advanced EmComm operations is detailed. The RESOURCE page has many excellent outside links.

- ♦ If you are on Facebook, contribute to the KARO ECHO Facebook Group Page at <https://www.facebook.com/groups/1451216838315743/>
- ♦ If you haven't already filled out the JOIN form please do. Find it as a drop down menu under "Get Involved" See <https://www.karoecho.net/join>
- ♦ A follow-through novice primer has been put on the website for new hams once they have bought their radio and want to learn more. See: <https://drive.google.com/file/d/10J-569BRrx5adhA-hJGPeNITU6B9Yi6z/view>
- ♦ Also a new Dual-Band antenna primer for new hams who want to graduate from the rubber-duddy world is at https://drive.google.com/file/d/1u_ozABBRYDJDACFJRTV_rxWF1WjCgW_I/view
- ♦ Note that the Tram 1480 gain dual band antenna is currently still available for \$51 (no tax and free shipping) on ebay or from Home Depot. That and an inexpensive speaker tripod is a dynamite combination for portable operation. This antenna is equivalent to the Diamond X-200a antenna which sells at HRO for \$125.00 before taxes and shipping.
- ♦ For newbies, please visit <https://www.karoecho.net/workstreams/training> and read the study materials. It is all there except for hands-on experience. Ask questions!
- ♦ Following the Thursday evening net check-in, there is often a training session and/or discussion.
- ♦ All recent KARO ECHO **Minutes will be found at our Past Events page** We are now including past Executive Board Minutes as well. [Newsletters are on the Documents Page.](#)

If you desire to be removed from this email list, please email info@karoecho.net

Other Resources

"ALERTWildfire" camera links in our area:

[Wildcat Canyon cam](#)

[Vollmer Peak cam](#)

[Nichol Knob cam](#)

[View real-time data from any weather station in the state.](#)

[Albany Radio Groups.io forum](#)

[Eastbay Resilience Groups.io forum](#)

[Marina Bay Neighbors and 1st Wed West county GMRS net](#)

Digital Modes for Emergency Communications (continued)

As a continuation from the [December newsletter](#) and [December membership meeting presentation](#) on digital modes, the following introduces Winlink and VARA high speed modulation. Walnut Creek hams and CERT have recently planned and tested an emergency communications system around these tools and Don NI6A, Frans KJ6IUV and Howdy KE6BEE have begun some testing with these over the past few weeks.

[Winlink](#) is a messaging platform that can be used with multiple types of digital modulation (packet and others) on most ham radio bands (HF, VHF, UHF, etc.). The Winlink application resembles an email program and the worldwide network of ham Radio Message Server (radio to internet) and the central Common Message Servers, linked through the internet, provide a radio based email system that is bridged to the internet. Among many other uses, this system is popular to send messages from private mariners with ham licenses to the mainland using HF bands. Winlink is also used by many government and emergency communications organizations and it includes a large number of template emergency forms like the ICS series and forms from ARRL, FEMA, IARU, and much more. While Winlink is normally operated as an internet connected messaging service, it can also be used peer-to-peer between just two radio operators, as well as with a dedicated local server, for local storage and forwarding, that is not internet connected. The latter two modes of operation are more likely the approach that would be used in emergency communications.

While Winlink can be used with traditional packet radio modulation. The new VARA mode promises considerably faster transfer rates (~10x faster). VARA is developed by a ham in Spain and [can be downloaded here](#). It integrates well with Winlink, but in order to support the higher speeds, there are stricter criteria for the hardware modem/TNC and radio than other modes. For instance, it is not generally possible to connect audio to mic/speaker ports on a radio. Instead, radios with a dedicated data port are typically needed and these tend to be available on more expensive radios as opposed to a basic HT. The [mini-DIN 6-pin port](#) is a cross-manufacturer industry standard interface that generally supports high speed digital modulation. [Signalink](#) and [DRA series](#) “soundcard” modems are popular for use with VARA.

The technical potential of this fast digital mode is promising, but there are some downsides to this approach. Winlink is only available for the Windows operating system, so it is not cross-platform, although it can be run through Windows emulation tools on other platforms. Likewise VARA is a Windows application. Also, to access the higher speeds offered by VARA, the radio is likely more expensive (\$150-300) and there is a licensing fee for the software of \$70, which can cover one call sign plus 15 auxiliary calls (same call with -1, -2, etc. following). This could be a club call sign that is shared over many operating sites, for instance. Despite the speed advantage of VARA, it may ultimately be more practical to utilize packet modulation with Winlink to allow use with a greater range of existing low cost radios and avoid the cost of licensing the software.